

Medical Gas Capillary Fitting Data Sheet



Lawton Capillary Medical Fittings	8mm - 219mm
Applications	Medical Gas Piping Systems
Market Segment	Public and Commercial
Material	CW024A Copper, CW614N Brass
Joining Method	Soldering, Brazing
Maximum Operating Pressure	See Table on Page 2
Dimensions and Catalogue	See webpage
Product Marking	Permanent marking, Lawton Logo, Size
Warranty	75 Years (See website for T&Cs)
Electrical Continuity	Yes
Form of Supply	Individual Bags, Boxes
Inner Surface Quality	Clean and Smooth, Carbon Content $\leq 1.0 \text{ mg/dm}^2$
Thread Specification	Male - ISO 7/EN 10226-1 Female - BS EN ISO 228
Assembly Instructions	See Webpage
Manufacturing Standard	EN 1254-1
Performance Standard	EN 1254-1, HTM 02-01

Material Composition and Other Properties

Copper Content Including Silver	≥ 99.90 %
Phosphorus	0.015 - 0.040 %
Total Impurities Excluding Phosphorus and Silver	< 0.060 %
Melting Point	1083 °C
Density	8.96 g/cm ³

Maximum Operating Pressure - Soft Solder ^{b c}

Nominal Size	Service Temperature			
	Min -40°C	30°C	65°C	Max 110°C
8mm to 28mm	25 bar	25 bar	25 bar	16 bar
35mm to 54mm	25 bar	25 bar	16 bar	10 bar
66.7mm ^c	16 bar	16 bar	16 bar	10 bar

^b Soft solder: tin/copper or tin/silver alloys to EN ISO 9453

^c Fittings above nominal size of 66.7 mm shall not be assembled using soft solder due to its insufficient mechanical strength

Maximum Operating Pressure - Hard Solder ^e

Nominal Size	Service Temperature				
	Min -40°C	65°C	120°C	Max 150°C	Max 200°C
8mm	62.5 bar	62.5 bar	58.8 bar	46.7 bar	23.3 bar
10mm	50.9 bar	50.9 bar	47.9 bar	38.0 bar	19.0 bar
12mm	42.9 bar	42.9 bar	40.3 bar	32.0 bar	16.0 bar
15mm	40.3 bar	40.3 bar	37.9 bar	30.1 bar	15.0 bar
22mm	35.6 bar	35.6 bar	33.5 bar	26.6 bar	13.3 bar
28mm	28.2 bar	28.2 bar	26.5 bar	21.1 bar	10.5 bar
35mm	25.2 bar	25.2 bar	23.7 bar	18.8 bar	9.4 bar
42mm	23.2 bar	23.2 bar	21.8 bar	17.3 bar	8.6 bar
54mm	19.8 bar	19.8 bar	18.6 bar	14.7 bar	7.4 bar
66.7mm	18.6 bar	18.6 bar	17.5 bar	14.0 bar	6.9 bar
76.1mm	18.6 bar	18.6 bar	17.5 bar	14.0 bar	6.9 bar
108mm	17.2 bar	17.2 bar	16.2 bar	12.9 bar	6.4 bar
133mm	10.5 bar	10.5 bar	8.5 bar	7.7 bar	4.1 bar
159mm	11.7 bar	11.7 bar	9.7 bar	8.6 bar	4.6 bar
219mm	12.8 bar	12.8 bar	10.4 bar	9.4 bar	5.0 bar

^e Hard solder as defined in copper/silver hard solder (brazing alloy) EN ISO 17672

For more details, please refer to our website or contact us by e-mail at technical@lawtontubes.co.uk